



State of Michigan

National Pollutant Discharge Elimination System Permit Application Appendix

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Please Do Not Return This Appendix with the Completed Application

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Additional Application Instructions

Instructions for Completing Section I, Items 1 through 8

- 1) NPDES PERMIT NUMBER: Applicants for permit reissuances and modifications should provide the NPDES permit number of the existing permit. Applicants for new discharges should enter NA (not applicable).
- 2) APPLICANT NAME AND MAILING ADDRESS:
 - For industrial facilities - provide the parent company name and the division name.
 - For federal and state facilities - provide the department name and the division or bureau name.
 - For commercial facilities - provide both the owner's and business's names.
 - For publicly-owned facilities - identify the legal owner of the facility and their mailing address.
- 3) FACILITY NAME AND LOCATION: Provide the name of the facility or plant. Provide the street address of the facility or plant. **DO NOT USE** P.O. Box numbers.
- 4) CONTACTS: Please provide the name, mailing address, telephone number and, where appropriate, the fax number and e-mail address of the following contacts:
 - Application: The person who should be contacted with questions concerning this permit application.
 - Facility: Each facility is required to have a facility contact. The facility contact for a publicly-owned treatment works should be the superintendent or a properly certified operator who is in charge of the day-to-day operation and maintenance of the treatment facility. The facility contact for a corporation should be a principal executive officer of at least the level of vice president, or their designated representative if the representative is responsible for the overall operation of the facility from which the discharge described in this permit application occurs. The facility contact for a partnership should be a general partner. The facility contact for a sole proprietorship should be the proprietor. The facility contact for a municipal, state, or other public facility should be a principal executive officer, the mayor, village president, city or village manager, or other duly authorized employee.
 - Discharge Monitoring Reports (DMRs): The person responsible for completing and returning the facility's Discharge Monitoring Reports.
 - Biosolids Billing: The person responsible for payment of the land application fee required by Section 324.3132 of the Michigan Act.
 - Storm Water Billing: The person responsible for payment of the facility's storm water permit fee required by Section 324.3118 of the Michigan Act.
 - NPDES Annual Billing: The person responsible for payment of the facility's NPDES Permit annual fee required by Section 324.3120 of the Michigan Act.
- 5) PERMIT ACTION REQUESTED: Indicate what type of permit action is being requested.
- 6) RULE 98 - ANTIDEGRADATION REQUIREMENTS: If this facility has never discharged wastewater to the surface waters (New Use), or the facility is discharging but has never been issued an NPDES permit (existing unpermitted), or the facility is requesting reissuance or modification of a previously issued NPDES permit and increasing the loading of pollutants to the receiving water, then check "yes" in this section and provide an Antidegradation Demonstration.
- 7) ADDITIONAL FACILITY LOCATION INFORMATION: Provide the following information.
 - A. Is the treatment facility located within municipal boundaries?
 - B. Identify the county and, where appropriate, the township where the facility is located.
 - C. Identify the location of the facility using State Planar Coordinates (e.g., Town 1 N, Range 12 E, Section 34, SE1/4, NE 1/4), or where applicable, the Private (French) Land Claim designation.
 - D. Identify the location of the facility using latitude and longitude, accurate to within 15 seconds (e.g., Latitude = 42°27'15", Longitude = -83°02'30"), or accurate to within 0.004 decimal degrees (e.g., Latitude = 42.454167, Longitude = -83.041667).
- 8) CERTIFIED OPERATOR: Provide the operator's name, certification number, certification classification(s), address, telephone number(s), and e-mail address. The Michigan Act requires that all municipal / domestic, commercial and industrial dischargers to the surface waters of the State of Michigan employ a properly certified operator. Questions about operator certification should be directed to the Environmental Sciences and Services Division, Operator Training and Certification Unit, at 517-373-4755.

Instructions for Completing Section II B., Items 1 A – H Municipal or Sanitary Wastewater

1. OUTFALL INFORMATION

This item requires detailed information on each outfall at the facility (Wastewater Treatment Plant [WWTP] or Retention Treatment Basin [RTB]). For this item, outfall refers to the point where treated wastewater from a WWTP or RTB is discharged to the surface waters of the state. "Surface waters of the state" means all of the following, the Great Lakes and their connecting waters, all inland lakes, rivers, streams, impoundments, open drains, wetlands, other surface bodies of water within the confines of the state, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control. The applicant will need to complete Pages 7 – 13 for each outfall. Fill in the Outfall Number in the top right-hand box, identifying the outfall by number, e.g., 001, 002, etc. Applicants with existing NPDES permits should refer to the facility's current NPDES permit for outfall number identification. For each outfall, provide the location, the expected and/or measured volume of effluent discharged, the frequency of the discharge, and the flow variation of the discharge.

- A. Identify the receiving water (Surface Waters of the State) to which the facility's outfall(s) discharge. Identify the Hydrologic Unit Code (HUC). See the Upper and Lower Peninsula Hydrologic Maps in the Appendix for the appropriate HUC.
- B. Identify the county and township where the outfall is located.
- C. Identify the location of the outfall using State Planar Coordinates. (e.g., Town 1 N, Range 12 E, Section 34. SE 1/4, NE 1/4) or, where applicable, the Private (French) Land Claim designation.
- D. Identify the location of the outfall using latitude and longitude, accurate to within 15 seconds (e.g., Latitude = 42°27'15", Longitude = - 83°02'30"), or accurate to within 0.004 decimal degrees (e.g., Latitude = 42.454167, Longitude = -83.041667).
- E. Enter the Annual Average Design Flow that the facility is designed to treat. **Continuous Dischargers** are required to enter the Total Volume (million gallons per day [MGD]) of wastewater the facility is designed to treat as discharged per-day. **Seasonal Dischargers** are required to enter the total volume (million gallons per year [MGY]) of wastewater the facility is designed to treat and discharge per year. The design flow is used in determining the appropriate effluent limitations for the discharge.
- F. A discharge is considered to be seasonal if the facility treats / **stores** wastewater throughout the year, or portion of the year, and then discharges it a few days, weeks, or months a year. Provide the dates the facility discharges the treated wastewater (e.g., October 15 through November 10) and the average discharge flows (e.g., 5 MGD).
- G. A continuous discharge is any discharge that is not a seasonal discharge. Provide the approximate hours per day and the number of days per year that the discharge occurs from this outfall. Also provide the actual annual average facility flow and the maximum daily facility flow for the past three years. Batch Dischargers are required to provide the peak batch flow rate; the number of batches per day; the per-batch minimum, average, and maximum volumes in gallons; and the per-batch minimum, average, and maximum batch discharges in minutes.

Instructions for Completing Section III B., Items 1. A – J (Industrial or Commercial Wastewater)

1. OUTFALL INFORMATION

This item requires detailed information on each outfall at the facility. For this item, outfall refers to the point where outfall wastewater is discharged to the surface waters of the state. "Surface waters of the state" means all of the following, the Great Lakes and their connecting waters, all inland lakes, rivers, streams, impoundments, open drains, wetlands, other surface bodies of water within the confines of the state, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control. The applicant will need to complete Pages 20 – 25 for each outfall. Fill in the Outfall Number in the top right-hand box, identifying the outfall by number, e.g., 001, 002, etc. Applicants with existing NPDES permits should refer to the facility's current NPDES permit for outfall number identification. For each outfall, provide the location, the type of wastewater, the expected and/or measured volume of effluent discharged, the frequency of discharge, and the flow variation of the discharge.

- A. Identify the receiving water (Surface Waters of the State) to which the facility's outfall(s) discharge. Identify the Hydrologic Unit Code (HUC). See the Upper and Lower Peninsula Hydrologic Maps in the Appendix for the appropriate HUC.
- B. Identify the county and township where the outfall is located.

Additional Application Instructions

- C. Identify the location of the outfall using State Planar Coordinates (e.g., Town 1N, Range 12E, Section 34, SE 1/4, NE 1/4) or, where applicable the Private (French) Land Claim designation.
- D. Identify the location of the outfall using latitude and longitude, accurate to within 15 seconds (e.g., Latitude = 42°27'15", Longitude = -83°02'30"), or accurate to within 0.004 decimal degrees (e.g., Latitude = 42.454167, Longitude = -83.041667).
- E. Identify the type(s) of wastewater the facility will discharge from this outfall. Check as many types of wastewater as are appropriate. If the water is used in multiple areas, such as water that is first used for noncontact cooling water and then for another use, such as process water, indicate the final use only. For other common wastewater types, see "Table 9 - Other Types of Wastewater".
- F. When reporting the Maximum Design Flow Rate, identify the design flow for this specific outfall (e.g., batch treatment system flow, package treatment system flow, or some other finite treatment system flow). Please provide an explanation if "Pollution Prevention Measures" are expected to provide flow reductions.
- G. Identify the Maximum Daily Discharge Flow Rate that the facility is expecting to discharge in the next five years. This flow will be used to determine the facility's effluent limitations and will be the flow authorized in an issued permit. NOTE: Discharges of flows greater than the Discharge Flow Rate authorized in the permit will constitute a violation of the Michigan Act and would be subject to the penalties specified therein.
- H. A discharge is considered to be seasonal if the facility treats / stores wastewater throughout the year, or a portion of the year, and then discharges it a few days, weeks, or months a year. Provide the dates the facility discharges the treated wastewater (e.g., October 15 through November 10) and the average discharge flows (e.g., 5 MGD).
- I. A continuous discharge is any discharge that is not a seasonal discharge. Identify the average number of hours per day and the number of days per year that the discharge occurs from this outfall. Batch dischargers are required to provide the peak batch flow rate; the number of batches per day; the per-batch minimum; the average and maximum volumes in gallons; and the per-batch minimum, average, and maximum batch discharges in minutes.

NOTE: The units are as follows: GPD = gallons per day, MGD = millions of gallons per day, MGY = millions of gallons per year.

Instructions for Completing Section III B., Item 3.

3. EFFLUENT CHARACTERISTICS – CONVENTIONAL POLLUTANTS

Please note that effluent data already submitted through the eDMR reporting system need not be submitted with the application. Note the submittal on pages 22 and 24.

Existing facilities are required to report data from effluent sampled and analyzed by the permittee for the parameters listed below. For analytical test requirements, or if alternate test procedures for any parameter listed below have been approved, see Page ii, Item 5. New facilities are required to provide estimated effluent concentrations for the parameters listed below. (See the Definition Section in the Appendix for sampling definitions, including "maximum daily concentration" and "maximum monthly concentration.")

In accordance with 40 CFR 122.21, all applicants are required to report CBOD₅, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH. The applicant may, however, request that reporting of data for one or more of these required parameters be waived. Such requests shall be supported by adequate rationale. The request can be and rational for the waiver can be made on pages 22 and 24 of this Application.

Report available discharge data for the parameters listed in Section III.B.3 of this Application. Actual data shall be provided for existing discharges, and expected or estimated data provided for proposed discharges. Please include an explanation if "Pollution Prevention Measures" are expected to reduce pollutants. Certain types of discharges shall provide a minimum of analytical test data for specific parameters. See "Minimum Analytical Testing Requirements for Various Discharge Requests" in the Appendix for a list of specific discharge types and their specific parameters (e.g., noncontact cooling waters, petroleum groundwater cleanups, etc.). For assistance in determining the appropriate parameters to report, contact the Permits Section. Data for other conventional parameters not listed in Section III.B.3. can be reported in the blank spaces provided. To submit additional information, see Page ii, Item 3.

Additional Application Instructions

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows: $\mu\text{g/l}$ = micrograms per liter, mg/l = milligrams per liter, $^{\circ}\text{F}$ = degrees Fahrenheit, $^{\circ}\text{C}$ = degrees Celsius. **For analytical test requirements, see Page ii, Item 5.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform, use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total BOD_5 , total phosphorus, COD, TOC, ammonia nitrogen, and total suspended solids, use **24-hour composite samples** unless other frequency-sample type analyses are available.

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the district office, on a separate sheet attached to the Application, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled. See the Appendix, "Definitions" Section, for sampling definitions, including "maximum daily concentration" and "maximum monthly concentration."

REPORTING OF INTAKE DATA

Applicants attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants are required to report intake water data. A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters from the average level of the pollutant(s) remaining after treatment. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR, Part 122.45(g)). To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information shall be submitted for each parameter:

- a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.
- b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed.
- c) When applicable (for example, when the pollutant represents a class of compounds, e.g., BOD_5 , TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically, and biologically from the pollutants contained in the discharge. Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants.

Note: Applicants for groundwater remediation discharges should also report the intake characteristics of the contaminated groundwater.

Frequently-Asked Questions About the NPDES Permit Application

Q. Why do I have to apply for an NPDES permit?

A. The National Pollutant Discharge Elimination System (NPDES) Program protects the surface waters of the state by assuring that discharges of domestic and industrial wastewater comply with state and federal regulations. NPDES permits are required under Section 402 of the Federal Clean Water Act (the "Federal Act"), as amended (33 U.S.C. 1251 et seq, P.L. 92-500, 95-217), and under Part 31 of Michigan's "Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (the "Michigan Act"). Part 31 of the Michigan Act also provides authority for the State to issue NPDES permits. The Michigan Department of Environmental Quality (MDEQ) administers the NPDES permit program for the State of Michigan.

Q. I have never applied for an NPDES Permit. What will happen after I submit my application?

A. The application will be reviewed by the Permits Section staff for administrative and technical completeness. Applicants with incomplete applications will be contacted and required to supply any missing information. Only complete applications will move on to the next step.

Permits staff will determine if the proposed discharge qualifies for coverage under a general permit. A certificate of coverage will be issued to qualifying dischargers. If the discharge does not qualify for coverage under a general permit, the staff will begin processing the application for an individual permit.

Processing for an individual permit can include: development of treatment technology and/or water quality-based effluent limitations; drafting the permit, public notice, fact sheet, and other pertinent documents; a pre-public notice review period that allows the applicant to review the draft permit and other documents; and a public notice period.

There can be additional steps that occur during processing for an individual permit. Applicants may provide additional information and request review or clarification of permit conditions. During the public notice period, the general public may request that meetings or hearings be held to provide further input on the proposed discharge. The applicant or general public may request a meeting with the person issuing the permit. Each of these actions could impact the requirements of the draft permit.

If no objections are received to the proposed permit action during the public notice period, the MDEQ will make a final determination and the permit will be issued.

Q. Which POTWs are required to submit Whole Effluent Toxicity (WET) tests as part of their NPDES Permit Application?

A. All POTWs with a design flow of 1 MGD or greater, or if they have a Federal Industrial Pretreatment Program, or if they are otherwise required by the MDEQ, are required to submit WET Tests with their Application.

Q. How many WET tests are required for the NPDES Permit Application?

A. The MDEQ requires that POTWs that are required to submit WET tests shall, at a minimum, submit four tests that have been run quarterly in the previous year, or four tests that have been run once a year over the last five years. The tests shall be taken in such a manner that they will reflect seasonal variation.

Q. I have not completed the WET tests required for my NPDES Permit Application, and the Application is due. What do I do?

A. Submit your Application and provide a schedule for submission of the WET tests. Please note that the Application will be considered incomplete until the WET tests have been submitted. Submission of an incomplete Application may put applicants out of compliance with an existing NPDES permit, as applications for reissuance must be submitted 180 days prior to permit expiration.

Q. There is not enough space on the Application to submit all the information that the application requires. What should I do?

A. Many of the pages on the Application have been created so that they can be easily duplicated and used to submit outfall or effluent data. Additional information can be submitted in spreadsheets or other appropriate media.

Q. How do I determine what Hydrologic unit Code (HUC) is??

A. Pages 19 and 20 of this Appendix are watershed maps of the upper and lower peninsulas. Determine your HUC using these maps, or you may visit the United States Environmental Protection Agency (USEPA) Surf Your Watershed Web site. The URL for that site is www.epa.gov/surf/.

Q. How do I determine the latitude and longitude of my discharge?

A. This information can be obtained using a Global Positioning System, by the use of United States Geological Survey (USGS) Topographical maps, or at various World Wide Web map sites.

Q. How do I determine the quarter-quarter section, township, and range of my discharge?

A. This information can be obtained using USGS Topographical maps, plat maps, or at various World Wide Web map sites.

Q. Do I really need to list all of the adjacent property owners?

A. Yes, this information is required for the Application to be considered administratively complete. The information can be obtained from the local unit of government via tax rolls. Please use the property owners mailing address not the address for a vacant lot or empty building.

Frequently-Asked Questions

Q. What if I do not have all of the information required by the Application?

A. Applications for new discharges will not be processed unless all of the requested information is provided. Applications for existing discharges may be processed without all of the required information, provided that the missing information is not needed to draft the reissued permit, and provided that the applicant has agreed to provide the missing information prior to the public notice period for the draft permit.

Q. I do not know the average flow rate for regulated storm water that flows from my facility. What should I do now?

A. You may enter "UNKNOWN" in the column for Average Flow Rate.

Q. How much effluent data is sufficient for the Application to be considered complete?

A. The effluent data must be sufficient to accurately characterize the facility's discharge. Effluent limitations will be based in part on the information submitted. If the data is insufficient, the effluent limitations will not reflect the facility discharge and may be unnecessarily restrictive.

Q. Is there an NPDES Permit Application Fee?

A. Yes, this non-refundable fee must be submitted along with the Permit Application. Application fees are as follows:

EPA major facility individual permit	\$750.00
EPA minor facility individual permit, CSO permit, or wastewater stabilization lagoon individual permit	\$400.00
EPA minor facility general permit.....	\$75.00

Q. Is there an Annual Permit Fee?

A. Yes, permittees with authorization to discharge wastewater are subject to Annual Permit Fees. Further information on Annual Permit Fees can be viewed via the Internet (<http://www.michigan.gov/deq>). On the left side of the screen click on Water, Surface Water, and NPDES Permits; click on "NPDES Permit Fees" which is under the Information banner, then click on NPDES Fees: Frequently Asked Questions and Answers).

Acronyms Used in the NPDES Permit Application

CERCLA ----- Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)	
CD-R ----- Compact Disk Recordable	MAHL ----- Maximum Allowable Headworks Loading
COC ----- Certificate of Coverage	NAICS ----- North American Industry Classification System
CNMP ----- Comprehensive Nutrient Management Plan	POTW ----- Publicly-Owned Treatment Works
CPLR ----- Cumulative Pollutant Loading Rate	QA/QC ----- Quality Assurance / Quality Control
DL ----- Detection Level	QL ----- Quantification Level
DMR ----- Discharge Monitoring Report	SIC ----- Standard Industrial Classification
FIPP ----- Federal Industrial Pretreatment Program	SIU ----- Significant Industrial User
IPP ----- Industrial Pretreatment Program	TWTDs ----- Treatment Works Treating Domestic Sewage
HUC ----- Hydrologic Unit Code	WET ----- Whole Effluent Toxicity

Definitions for Purposes of This Application

24-Hour Composite Sample is a flow-proportioned composite sample consisting of hourly or more frequent portions that are taken over a 24-hour period.

Average Monthly Concentration is the average of all of the monthly concentrations.

Biosolids refers to the solids resulting from the treatment of domestic sanitary sewage. Following treatment, these solids are suitable for land application.

Certificate of Coverage is a site-specific document that authorizes a facility to discharge under a general permit.

Cumulative Pollutant Loading Rate (CPLR) means the maximum amount of an inorganic pollutant that can be applied to an area of land.

Detection Level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

Discharge Location is defined as the point where a discharge enters the "surface waters of the state."

Flow Proportioned Sample is a composite sample, with the sample volume proportional to the effluent flow.

Geometric Mean is the n^{th} root of the product of n numbers.

Grab Sample is a single sample taken at neither a set time nor flow.

Definitions

Maximum Allowable Headworks Loading is the maximum loading of a pollutant that will not cause a POTW to violate a treatment plant or environmental criterion developed to prevent process inhibition or interference, or to violate effluent or biosolids standards.

Maximum Daily Concentration is the maximum daily concentration recorded since the last permit issuance. (Daily Concentration is the sum of the concentrations of the individual samples of a parameter divided by the number of samples taken during any calendar day. If the parameter concentration in any sample is less than the method quantification level, regard that value as the quantification level when calculating the daily concentration, and indicate that the result is "less than" the value reported.)

Maximum 7-Day Concentration is the maximum seven-day concentration recorded since the last permit issuance. (Seven-Day Concentration is the sum of the daily concentrations determined during any seven consecutive days in a calendar month, divided by the number of daily concentrations determined. If any daily concentration is less than the method quantification level, regard that value as the quantification level when calculating the monthly concentration, and indicate that the result is "less than" the value reported.)

Maximum Monthly Concentration is the maximum monthly concentration recorded since the last permit issuance. (Monthly Concentration is the sum of the daily concentrations determined during a reporting month (or 30 consecutive days), divided by the number of daily concentrations determined. If any daily concentration is less than the method quantification level, regard that value as the quantification level when calculating the monthly concentration, and indicate that the result is "less than" the value reported.)

Michigan Water Quality Standards are rules that establish water quality requirements for the state's surface waters that protect public health and welfare, enhance and maintain the state's water quality, and protect the state's natural resources.

Noncontact Cooling Water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product, or finished product.

Primary Industries are listed in Table 1 of the Appendix.

Quantification Level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring the contaminant.

Secondary Industries are those industries that are not listed as primary industries.

Significant Industrial User is defined in the Title 40 of the Code of Federal Regulations (40 CFR), Section 403.3(t).

Storm Water - Not Regulated is a storm water discharge that does not need a permit under federal storm water regulations at 40 CFR 122.26(b)(14).

Storm Water - Regulated is defined in 40 CFR 122.26 (b) (14), Storm Water Discharges Associated with Industrial Activities, and includes storm water discharges from 1) various types of industries identified in the regulations; 2) Treatment Works Treating Domestic Sewage (TWTDS) with design flows equal to or greater than 1 MGD, or that have Federal Industrial Pretreatment Programs; and 3) any storm water discharge subject to effluent guidelines as defined below.

Storm Water Subject to Effluent Guidelines is a regulated storm water discharge for which federal effluent limitation guidelines exist. Such guidelines currently exist under the following sections of the federal regulations, 40 CFR: 411 - cement manufacturing; 412 - feedlots; 418 - fertilizer manufacturing; 419 - petroleum refining; 422 - phosphate manufacturing; 423 - steam electric; 434 - coal mining; 436 - mineral mining and processing; 440 - ore mining and dressing; and 443 Subpart A - asphalt emulsion.

Rule 323.1098 Antidegradation

Rule 1098 of the Part 4 Rules applies to any NPDES permit action that is anticipated to result in a new or increased loading of pollutants to the surface waters of the state. It requires applicants to show how the discharge is exempt under Subrule (8) or (9), or provide a demonstration under Subrule (4) that identifies the social or economic development and benefits that will be foregone in the area where the waters are located if the lowering of the water quality is not allowed.

The following examples are considered to be an increase in loading, requiring either a statement of exemption or an Antidegradation Demonstration:

- A new use.
- An increase in flow.
- An increase in a mass limit.
- An increase in thermal loading.
- An increase in concentration limits with no change in flow..
- The addition of a new waste stream that will not require an authorization to increase the flow of the discharge.
- An existing discharger which has never received an effective NPDES permit for discharges at a particular site.

The following examples are not considered to be increases in loading, and do not require an Antidegradation Demonstration:

- A change in the Water Quality-Based Effluent Limits (WQBEL) for mercury or Polychlorinated Biphenyls (PCBs) due to a change in the Water Quality Standard.
- A newly-established limit for a parameter when there has been no action on the part of the permittee to increase the mass loading.
- Limits that are eliminated.

Antidegradation

In accordance with Subrules (8) and (9), certain discharges are exempt from submitting an Antidegradation Demonstration. Applicants with these discharges shall submit a statement of exemption from the antidegradation requirements, detailing the reason(s) why the discharge is exempt. The following examples do not constitute a lowering of water quality and therefore are exempt from the antidegradation requirements:

- A short-term (weeks to months) or temporary lowering of water quality.
- Bypasses that are not prohibited by regulations set forth in 40 CFR §122.41(m).
- Response actions undertaken to alleviate a release of pollutants into the environment that may pose an imminent and substantial danger to the public health or welfare.
- Discharges of pollutant quantities from the intake water at a facility if the intake and discharge are to the same body of water.
- Increases in flow, if the increase is within the design flow of the facility, it is not specifically authorized in the current permit, and there is no significant change expected in the characteristics of the wastewater collected.
- Intermittent increased loading related to wet-weather conditions.
- New or increased loading due to MDEQ-approved controls related to wet-weather conditions.
- Discharges authorized by certificates of coverage and notices of coverage.
- Increased loadings within the authorized levels of a limit in an existing control document, except those loadings that result from actions by the permittee that would otherwise require submittal of an increased use request.
- Increased loadings of a pollutant which do not involve a Bioaccumulative Chemicals of Concern (BCC) and which use less than 10 percent of the unused loading capacity that exists at the time of the request.

All other applicants shall submit an Antidegradation Demonstration. In accordance with Rule 1098(4)(a), the applicant shall identify the social or economic development and the benefits to the area in which the waters are located that would be forgone if the new or increased loading of pollutants is not allowed. Examples of social or economic development and benefits may include:

- Employment Increases.
- Production Level Increases.
- Employment Reductions Avoidance.
- Efficiency Increases.
- Industrial, Commercial, or Residential Growth.
- Environmental or Public Health Problem Corrections.
- Economic or Social Benefits to the Community.

The applicant shall identify in the Antidegradation Demonstration alternatives to the proposed surface water discharge that have been considered and an explanation as to why the alternatives were not feasible. Alternatives to a surface water discharge may include, but are not limited to:

- Groundwater discharges.
- Discharges to available sewerage systems.
- Water reuse.
- Water recycling.

If there are any BCCs in the proposed discharge, then the Antidegradation Demonstration shall include the alternatives evaluated to reduce or eliminate the BCCs and which of the alternatives were selected.

Antidegradation Demonstrations for privately-owned treatment systems serving the public for the treatment of domestic wastewater from two or more residences shall include documentation of the methods established for the ongoing operation and maintenance of the sewerage system, as required under Section 4107 of Part 41 of the Michigan Act.

Please note: The applicant may indicate if the property is zoned for the intended use.

Rule 1098 can be found on the MDEQ's Internet Page. To access Rule 1098, go to <http://www.wichigan.gov/deq>. In the left column click on **WATER**, click on **Surface Water**, click on **NPDES Permits**, in the middle column under the "Information" banner click on **Applicable Rules and Regulations**, under the Applicable Rules and Regulations banner click on **Part 4 Rules**. Search for Rule 323.1098 Antidegradation.

Concentrated Animal Feeding Operation (CAFO) Guidance and Requirements

CAFO waste means CAFO process wastewater, manure, production area waste, silage leachate and runoff, any contaminated runoff, etc.

(1) The average and maximum number of animals expected during the five-year permit, the type of animals (beef cattle, broilers, layers, swine more or less than 55 lbs., mature dairy cows, dairy heifers, veal calves, turkeys, etc.), and type of housing (open confinement, under roof, etc.).

(2) The type of CAFO waste storage (roofed storage shed, storage ponds, underfloor pits, above or below ground storage tanks, concrete pad, etc.) and total combined capacity of all CAFO waste storage structures [both by volume (tons, gallons, cu. ft.) and by time (months)].

Concentrated Animal Feeding Operation Guidance and Requirements

(3) CAFO waste storage structure design – All new CAFO waste storage structures shall, at a minimum, be constructed in accordance with Natural Resource Conservation Service (NRCS) standards. The NRCS standard is Conservation Practice Standard No. 313, Waste Storage Facility, dated June 2003. For existing storage structures at existing CAFOs, through an evaluation by a professional engineer either (1) provide documentation that each storage structure is constructed in accordance with NRCS standards, or (2) demonstrate environmental performance equivalent to NRCS standards. If your farm is verified under the Livestock System of the Michigan Agriculture Environmental Assurance Program (MAEAP), you may submit the “Evaluation of Existing Components” for review by the Department. After review, the Department will notify you if additional information is necessary to complete your Application. If you cannot provide the documentation or demonstration required by (1) or (2) above, you may request that the permit or COC specify a date by which you will provide storage structures that attain (1) above, but that date cannot be more than three years after the permit or COC is issued. Guidance for the Evaluation of Existing Storage Structures can be found on our Web site or is available in print.

(4) The total number of acres under your control available for land application of CAFO waste. This would be land that you own, lease, or otherwise have access to for land application of CAFO waste. This does not include land application where you sell or give away your CAFO waste. If you are in the process of acquiring land at the time of application, then explain how much land and when you expect to acquire it.

(5) Estimated amounts of CAFO waste generated per year (annual average over the life of the permit) (tons, gallons, or cu. ft.).

(6) Estimated amounts of CAFO waste transferred (sold, given away, etc., where you have no control over the land application of that waste) to other persons per year (annual average) (tons, gallons, or cu. ft.).

(7) A list and map(s) showing the location of all land application fields. This list would include a name and/or number to identify the field and size in acres. Maps could be plat maps, aerial maps, or soil maps with each field highlighted or colored in, with a number to correspond to the list or FSA Form # 578 and associated maps. Information such as crop, soil type, and analysis will be included with the field-by-field analysis. This analysis does not need to be completed until after the permit or COC is issued.

(8) All potential receiving waters for both the production and land application areas. This would be rivers, creeks, and major drains where runoff would flow overland or through tiles. Consider slope and tile outlet locations to determine flow pathways. Include maps, if possible, with the waterways highlighted and named, if they have names. The same maps showing your application fields could show the receiving waters.

To access the MDEQ CAFO Web site, go to <http://www.michigan.gov/deq>. In the left column click on Water, click on Surface Water, click on NPDES Permits, and in the middle column under the Information banner click on Concentrated Animal Feeding Operation (CAFO).

Minimum Analytical Testing Requirements for Various Discharge Requests

Each discharge is evaluated on a case-by-case basis. This list is not inclusive of all analytical tests that may be requested from an applicant, but does include those parameters which we believe have the reasonable potential to violate water quality standards in these types of discharges.

Contact Cooling Water: Submit average and maximum levels of oil and grease, and average and maximum levels of total suspended solids; average and maximum summer and winter temperatures; and maximum and minimum pH. Total Residual Chlorine (TRC) analysis may be required if a city water source is used or a water treatment additive containing chlorine is used.

Cooling Tower Blowdown: Submit average and maximum levels of total dissolved solids, sulfates, chlorides, and total suspended solids; average and maximum summer and winter temperatures; maximum and minimum pH; Total Residual Chlorine (TRC).

Gasoline and Petroleum Related Cleanups: Submit analytical test data for BETX (Benzene, Ethylbenzene, Toluene, and Xylenes), MTBE (Methyl tert Butyl Ether), total phosphorus, and total lead. If a treatment other than activated carbon is proposed or used, submit analytical test data for PAHs (polynuclear aromatic hydrocarbons).

Gypsum Mine Discharges: Submit average and maximum levels of total suspended solids, total dissolved solids, sulfates, and chlorides; minimum and maximum pH; analysis for the following metals (using quantification levels indicated in Table 7): total beryllium, total copper, total lithium, total selenium, total silver, total strontium, total thallium, and total zinc; analysis for dissolved sulfides (using either the Methylene Blue or Iodometric method referenced in Standard Methods with a quantification level of 20 µg/l) with temperature, conductivity, and pH measured with each sample taken for dissolved sulfides; and a value for hydrogen sulfide calculated using Standard Method 4500-S²⁻-H.

Limestone Quarry Discharges: Submit average and maximum levels of total suspended solids, total dissolved solids, sulfates, and chlorides; minimum and maximum pH; analysis for the following metals (using quantification levels indicated in Table 7): total beryllium, total copper, total lithium, total selenium, total silver, total strontium, total thallium, and total zinc; analysis for dissolved sulfides (using either the Methylene Blue or Iodometric method referenced in Standard Methods with a quantification level of 20 µg/l) with temperature, conductivity, and pH measured with each sample taken for dissolved sulfides; and a hydrogen sulfide value calculated using Standard Method 4500-S²⁻-H.

Noncontact Cooling Waters: Submit average and maximum summer and winter temperatures; and if pH control is required, the maximum and minimum pH. Total Residual Chlorine (TRC) analysis is required if a city water source or a water treatment additive containing chlorine is used.

Quarry Discharges (not specified above): Submit average and maximum levels of total suspended solids, total dissolved solids, sulfates, and chlorides; and maximum and minimum pH.

Water Softener Discharge: Submit average and maximum levels of total dissolved solids, sulfates, and chlorides.

Summary of Information to Be Reported by Industry Type

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- 40 CFR 405 Dairy Products Processing: Report mass of raw materials (milk equivalent or fluid raw whey) and mass of BOD₅ input of raw materials. If your facility is regulated under Subparts K or L of this category, also report total suspended solids of the raw materials.
- 40 CFR 406 Grain Mills: Report volume of final product per-volume of raw material in standard bushels or mean standard bushels (for corn or wheat); hundredweight (rice); or volume per-volume on a weight basis (for cereal or wheat flour as raw material).
- 40 CFR 407 Canned and Preserved Fruits and Vegetables Processing: Facilities regulated under Subparts A-G, report volume per-volume (weight basis) of raw materials. Facilities regulated under Subpart H, report volume per-volume (weight basis) of final product.
- 40 CFR 409 Sugar Processing: Facilities regulated under Subpart A, report volume per-volume (weight basis) of final product (crystallized refined sugar). Facilities regulated under Subparts B and C, report pounds per ton of melt, where melt is the amount of raw material (sugar) contained within an aqueous solution at the beginning of the process for production of refined sugar cane.
- 40 CFR 411 Cement Manufacturing: Facilities regulated under Subpart A, report pounds of final product. Facilities regulated under Subpart B, report pounds of dust leached.
- 40 CFR 414 Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF): Report (1) flow rates of individual process wastewater streams; (2) flow rates of individual metal-bearing or cyanide-bearing wastewater streams; (3) pounds of product generated per year for each product; and (4) indicate if end-of-pipe biological treatment exists.
- 40 CFR 415 Inorganic Chemicals Manufacturing: Report pounds of product.
- 40 CFR 419 Petroleum Refining: Report volume of feedstock (number of barrels) and volume of flow.
- 40 CFR 420 Iron and Steel Manufacturing: Report pounds of product. If air or vent scrubbers are used at the facility, describe the operations they are used in, and indicate the number of scrubbers in use.
- 40 CFR 421 Nonferrous Metals Manufacturing: Report weight of product produced, cast, or material recovered (see individual subparts for specific materials regulated), and provide a description of each specific process that produces a wastewater stream.
- 40 CFR 423 Steam Electric Power Generating: Report volume of flow from process wastewater streams, including contact cooling, cooling tower blowdown, and any other wastewaters other than noncontact cooling water, and total rating of electric generating capacity.
- 40 CFR 424 Ferroalloy Manufacturing: Report (1) megawatt hour(s) of electrical energy consumed in the smelting process (for electric furnaces only); (2) weight of product (for non-electric furnaces only and other if appropriate); and (3) weight of raw material processed.
- 40 CFR 425 Leather Tanning and Finishing: Report weight of raw material.
- 40 CFR 428 Rubber Manufacturing: Report (1) weight of raw material or raw material equivalent; and (2) weight of gross production.
- 40 CFR 429 Timber Products Processing: Report (1) weight per volume of production; and (2) weight of gross production.
- 40 CFR 430 Pulp, Paper, and Paperboard: Report (1) weight of product; and (2) provide a statement certifying that chlorophenolic containing biocides are not being used at the facility, if these biocides are not being used.
- 40 CFR 432 Meat Products: Report (1) weight of raw material (raw material measured in live weight killed or equivalent live weight killed); (2) weight of finished product, and if the facility is regulated under Subparts E-J; and (3) the manufacturing rate for individual products.
- 40 CFR 433 Metal Finishing: Report flow rates of individual processes generating wastewater streams.
- 40 CFR 436 Mineral Mining and Processing: If the facility uses HF floatation as a treatment process, report weight of total product.
- 40 CFR 440 Ore Mining and Dressing: Report (1) treatment or milling technique(s) employed; and (2) if the facility is regulated under Subparts F-H or J, report tons of product.
- 40 CFR 461 Battery Manufacturing: (1) Report weight of raw materials used, applied, deposited, or processed; and (2) weight of cells, powder, or other material produced.
- 40 CFR 463 Plastics Molding and Forming: Report average process wastewater usage flow rates for each individual process.
- 40 CFR 464 Metal Molding and Casting: Report (1) weight of material poured (casted); and (2) if air scrubbers are used, report volume of air scrubbed. If the facility is regulated under Subpart C, report (1) the weight of sand reclaimed (if applicable); and (2) the weight of metal poured annually (if applicable).
- 40 CFR 465 Coil Coating: Report (1) the total surface area of the material processed; and (2) if the facility is regulated under Subpart D, report the number of cans manufactured.
- 40 CFR 466 Porcelain Enameling: Report the total surface area of raw material processed or coated.
- 40 CFR 467 Aluminum Forming: Report the weight of raw material (aluminum) processed, including rolling, casting, forging, quenching, drawing, extruding, cleaning, and etching operations.
- 40 CFR 468 Copper Forming: Report weight of raw material (copper) processed, including rolling, drawing, heat treating, extruding, annealing, cleaning, pickling, tumbling, burnishing, coating, and forming operations.
- 40 CFR 471 Nonferrous Metals Forming and Metals Powders: Report weight of raw materials processed for various operations (see guidelines for descriptions of processes).
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TABLE 1 - Testing Requirements for Organic Toxic Pollutants by Industrial Category

(Table I from 40 CFR 122, Appendix D)

Industrial Category	GC/MS Fraction			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and Sealants	X	X	X	---
Aluminum Forming	X	X	X	---
Auto and Other Laundries	X	X	X	X
Battery Manufacturing	X	---	X	---
Coal Mining	X	X	X	X
Coil Coating	X	X	X	---
Copper Forming	X	X	X	---
Electric and Electronic Components	X	X	X	X
Electroplating	X	X	X	---
Explosives Manufacturing	---	X	X	---
Foundries	X	X	X	---
Gum and Wood Chemicals	X	X	X	X
Inorganic Chemicals Manufacturing	X	X	X	---
Iron and Steel Manufacturing	X	X	X	---
Leather Tanning and Finishing	X	X	X	X
Mechanical Products Manufacturing	X	X	X	---
Nonferrous Metals Manufacturing	X	X	X	X
Ore Mining	X	X	X	X
Organic Chemicals Manufacturing	X	X	X	X
Paint and Ink Formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum Refining	X	X	X	X
Pharmaceutical Preparations	X	X	X	---
Photographic Equipment and Supplies	X	X	X	X
Plastic and Synthetic Materials Manufacturing	X	X	X	X
Plastic Processing	X	---	---	---
Porcelain Enameling	X	---	X	X
Printing and Publishing	X	X	X	X
Pulp, Paper, and Paperboard Mills	X	X	X	X
Rubber Processing	X	X	X	---
Soap and Detergent Manufacturing	X	X	X	---
Steam Electric Power Plants	X	X	X	---
Textile Mills	X	X	X	X
Timber Products Processing	X	X	X	X

Following is a list of industrial categories and subcategories which are specifically suspended from submitting certain GC/MS data in 40 CFR 122, Appendix D, Note 1. If your industrial category or subcategory is specifically listed in the suspensions, you are not required to submit analytical data for the suspended GC/MS fractions listed below. In addition to the listed industries, 40 CFR 122.21 (g)(8) also provides for an exemption from reporting GC/MS analytical data for small businesses. Refer to the federal guidelines to determine if your facility is exempt.

Coal Mining Industry and Porcelain Enameling Industry

All four GC/MS organic fractions for all subcategories of these industries are suspended.

Leather Tanning and Finishing Industry, Paint and Ink Formulation, and Photographic Supplies

Pesticide fraction is suspended for all subcategories of these industries.

Petroleum Refining Industry

Acid, base/neutral, and pesticide fractions are suspended for all subcategories of this industry.

Textile Mills Industry

All four GC/MS organic fractions in the Greige Mills Subcategory are suspended.

Pesticide fraction in this category is suspended for all other subcategories of this industry.

Ore Mining and Dressing Industry

Volatile, base/neutral, and pesticide fractions in the Base and Precious Metals Subcategory are suspended.

All four GC/MS organic fractions in all other subcategories of this industry are suspended.

Gum and Wood Chemicals Industry

Pesticide fraction in the Tall Oil Rosin Subcategory and the Rosin-Based Derivatives Subcategory are suspended.

Pesticide and base/neutral fractions in all other subcategories of this industry are suspended.

Pulp and Paper Industry

Pesticide fraction in Papergrade Sulfite subcategories (Subparts J and U) is suspended.

Base/neutral and pesticide fractions in Deink (Subpart Q), Dissolving Kraft (Subpart F), and Paperboard from Waste Paper (Subpart E) are suspended.

Volatile, base/neutral, and pesticide fractions in the BCT Bleached Kraft (Subpart H), Semi-Chemical (Subparts B and C), and Non-Integrated Fine Papers (Subpart R) are suspended.

Acid, base/neutral, and pesticide fractions in Fine Bleached Kraft (Subpart I), Dissolving Sulfite Pulp (Subpart K), Groundwood Fine Papers (Subpart O), Market Bleached Kraft (Subpart G), Tissue from Wastepaper (Subpart T), and Nonintegrated Tissue Papers (Subpart S) are suspended.

Steam Electric Power Plant Industry

Base/neutral fraction in the Once-Through Cooling Water, Fly Ash, and Bottom Ash Transport Water process wastestreams are suspended.

TABLE 2 - Organic Toxic Pollutants in each GC/MS Fraction

(Table II from 40 CFR 122, Appendix D)

Volatiles		
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethylene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Trans-Dichloroethylene 1,3-Dichloropropylene 2-Chloroethylvinylether	Acrolein Acrylonitrile Benzene Bromoform Carbon Tetrachloride Chlorobenzene Chlorodibromomethane Chloroethane Chloroform Dichlorobromomethane	Ethylbenzene Methyl Bromide Methyl Chloride Methylene Chloride Tetrachloroethylene Toluene Trichloroethylene Vinyl Chloride
Acid Compounds		
2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol	2-Chlorophenol 2-Nitrophenol 4,6-Dinitro-O-Cresol 4-Nitrophenol	P-Chloro-M-Cresol Pentachlorophenol Phenol
Base/Neutral		
1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine (as Azobenzene) 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2-Chloronaphthalene 3,3'-Dichlorobenzidine 3,4-Benzofluoranthene 4-Bromophenylphenylether 4-Chlorophenyl Phenyl Ether Acenaphthene Acenaphthylene Anthracene	Benzidine Benzo (a) Anthracene Benzo (a) Pyrene Benzo (ghi) Perylene Benzo (k) Fluoranthene Bis (2-Chloroethoxy) Methane Bis (2-Chloroethyl) Ether Bis (2-Chloroisopropyl) Ether Bis (2-Ethylhexyl) Phthalate Butylbenzyl Phthalate Chrysene Di-N-Butyl Phthalate Di-N-Octyl Phthalate Dibenzo (a,h) Anthracene Diethyl Phthalate Dimethyl Phthalate	Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Indeno (1,2,3-cd) Pyrene Isophorone N-Nitrosodi-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine Naphthalene Nitrobenzene Phenanthrene Pyrene
Pesticides		
4,4'-DDD 4,4'-DDE 4,4'-DDT α -BHC α -Endosulfan Aldrin β -BHC β -Endosulfan Chlordane	δ -BHC Dieldrin Endosulfan Sulfate Endrin Endrin Aldehyde γ -BHC (Lindane) Heptachlor Heptachlor Epoxide PCB-1016	PCB-1221 PCB-1232 PCB-1242 PCB-1248 PCB-1254 PCB-1260 Toxaphene

TABLE 3 - Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

(Table III from 40 CFR 122, Appendix D)

Total Antimony	Total Copper	Total Phenols
Total Arsenic	Available Cyanide (EPA Method OIA-1677)	Total Selenium
Total Beryllium	Total Lead	Total Silver
Total Cadmium	Total Mercury (EPA Method 1631)	Total Thallium
Total Chromium	Total Nickel	Total Zinc

TABLE 4 - Conventional and Non-Conventional Pollutants to Be Tested by Existing Dischargers if Expected to Be Present in Discharge

(Table IV from 40 CFR 122, Appendix D)

Aluminum, Total	Magnesium, Total	Radium, Total
Barium, Total	Manganese, Total	Radium 226, Total
Boron, Total	Molybdenum, Total	Sulfate (as SO ₄)
Bromide	Nitrate-Nitrite (as N)	Sulfide (as S)
Chlorine, Total Residual	Nitrogen, Total Organic (as N)	Sulfite (as SO ₃)
Cobalt, Total	Oil and Grease	Surfactants
Color	Phosphorus (as P), Total	Tin, Total
Fecal Coliform	Radioactivity	Titanium, Total
Fluoride	Alpha, Total	
Iron, Total	Beta, Total	

TABLE 5 - Toxic Pollutants and Hazardous Substances Required to Be Identified by Existing Dischargers if Expected to Be Present in Discharge

(Table V from 40 CFR 122, Appendix D)

Toxic Pollutant		
Asbestos		
Hazardous Substances		
2,2-Dichloropropionic Acid	Diethyl Amine	Monomethyl Amine
2,4,5-T (2,4,5-Trichlorophenoxy Acetic Acid)	Dimethyl Amine	Naled
2,4-D (2,4-Dichlorophenoxyacetic acid)	Dinitrobenzene	Napthenic Acid
Acetaldehyde	Diquat	Nitrotoluene
Allyl Alcohol	Disulfoton	Parathion
Allyl Chloride	Diuron	Phenolsulfonate
Amyl Acetate	Epichlorohydrin	Phosgene
Aniline	Ethanolamine	Propargite
Benzonitrile	Ethion	Propylene Oxide
Benzyl Chloride	Ethylene Diamine	Pyrethrins
Butyl Acetate	Ethylene Dibromide	Quinoline
Butylamine	Formaldehyde	Resorcinol
Captan	Furfural	Silvex
Carbaryl	Guthion	Strontium
Carbofuran	Isoprene	Strychnine
Carbon Disulfide	Isopropanolamine	Styrene
Chlorpyrifos	Kelthane	TDE (Tetrachlorodiphenylethane)
Coumaphos	Kepone	Trichlorofon
Cresol	Malathion	Triethylamine
Crotonaldehyde	Mercaptodimethur	Trimethylamine
Cyclohexane	Methoxychlor	Uranium
Diazinon	Methyl Mercaptan	Vanadium
Dicamba	Methyl Methacrylate	Vinyl Acetate
Dichlobenil	Methyl Parathion	Xylene
Dichlone	Mevinphos	Xylenol
Dichlorvos	Mexacarbate	Zirconium
	Monoethyl Amine	

Table 5 continued

Other or Additional Toxic Pollutants (Michigan Critical Materials)

1,1,1,2-tetrachloroethane	5-chloro-o-toluidine	Cobalt
1,1,2,2-tetrachloroethane	5-nitro-o-anisidine	Copper
1,1,2-trichloroethane	5-nitroacenaphthene	Crotoxyphos
1,1-dichloroethylene	Abietic acid	Cupferron
1,2,3,4-tetrachlorobenzene	Acetone cyanohydrin	Cyanides
1,2,3,5-tetrachlorobenzene	Acrolein	Cycasin
1,2,3-trichlorobenzene	Acrylonitrile	Cycloheximide
1,2,4,5-tetrachlorobenzene	Actinomycin D	Cyclophosphamide
1,2,4-trichlorobenzene	Aflatoxins	DDT (p,p', o,p' and technical grade)
1,2-dichlorobenzene	Aldicarb	Dehydroabietic acid
1,2-dichloroethane	Aldrin	Demeton
1,2-epoxybutane	Aminoazobenzene	Di-n-octyl phthalate
1,2:3,4-diepoxybutane	Amitrole	Diallate
1,3-butadiene	Anilazine	Dibenz(a,h)anthracene
1,3-dichlorobenzene	Aniline hydrochloride	Dibromochloropropane (DBCP)
1,3-dichloropropene	Antimony	Dibutyl phthalate
1,3-propane sultone	Antimycin A	Dichrotophos
1,4-dichlorobenzene	Aramite	Dieldrin
1,4-dioxane	Arsenic	Diethylhexyl phthalate
1,5-naphthalenediamine	Asbestos	Diethylstilbestrol
1-amino-2-methylantraquinone	Azinphos-ethyl	Dihydrosafrole
1-chloro-4-phenoxybenzene	Azinphos-methyl	Dimethoate
1-chloropropene	Azobenzene	Dimethyl disulphide
2,3,4,5-tetrachlorophenol	Barban	Dimethyl sulfate
2,3,4,6-tetrachlorophenol	Bendiocarb	Dimethylhydrazines
2,3,5,6-tetrachlorophenol	Benomyl	Dinitrotoluenes
2,4,5-trichlorophenol	Benz(a)anthracene	Dinocap
2,4,5-trichlorotoluene	Benzene	Dinoseb
2,4,5-trimethylaniline	Benzidine (and salts)	Dioxathion
2,4,6-trichlorophenol	Benzo(a)pyrene	Diphenyl ether
2,4-diaminoanisole sulfate	Beryllium	Endosulfan
2,4-diaminotoluene	beta-propiolactone	Endrin
2,4-dichlorophenol	Bis(2-chloroethyl)ether	EPN
2,4-dinitrophenol	Bis(chloromethyl)ether	Ethyl chloride
2-acetylaminofluorene	Bromomethane	Ethylene oxide
2-aminoanthraquinone	Bromoxynil	Ethylene thiourea
2-methyl-1-nitroanthraquinone	Butyl benzyl phthalate	Ethyleneimine
2-naphthylamine	Butylbutanol nitrosamine	Ethylmethanesulfonate
2-nitropropane	Cadmium	Fensulfothion
3,3'-dichlorobenzidine	Captafol	Fenthion
3-(chloromethyl)pyridine hydrochloride	Carbon tetrachloride	Fluchloralin
3-amino-9-ethylcarbazole	Carbophenothion	Furathiazole
3-amino-9-ethylcarbazole hydrochloride	Chloramines	Heptachlor
4,4'-diaminodiphenyl ether	Chlordane	Heptachlor epoxide
4,4'-methylenebis (2-methylaniline)	Chlordecone	Hexachlorobenzene
4,4'-methylenebis(N,N-dimethyl) benzenamine	Chlorfenvinphos	Hexachlorobutadiene
4,4'-thiodianiline	Chlorine (elemental cl and hypochlorite salts)	Hexachlorocyclohexane (all isomers)
4,6-dinitro-o-cresol	Chlorobenzene	Hexachlorocyclopentadiene
4-aminobiphenyl	Chlorobenzilate	Hexachloroethane
4-aminopyridine	Chloroform	Hexamethylphosphoramide
4-bromophenyl phenyl ether	Chloromethane	Hydrazine
4-chloro-m-phenylenediamine	Chloroprene	Hydrazobenzene
4-chloro-o-phenylenediamine	Chromium	Hydrogen sulfide
4-dimethylaminoazobenzene	Clonitralid	Hydroquinone

Table 5 continued

Isonicotinic acid hydrazine	Neoabietic acid	Polychlorinated dibenzofurans (PCDF)
Kanechlor C	Nickel	Polychlorinated dioxins (PCDD)
Ketene	Nifurthiazole	Polychlorinated naphthalenes
Lactonitrile	Niridazole	Propyleneimine
Lasiocarpine	Nithiazide	Propylthiouracil
Lead	Nitrobenzene	Rotenone
Leptophos	Nitrofen	Selenium
Lithium	Nitrogen mustard	Semicarbazide
m-cresol	o-Aminoazotoluene	Semicarbazide hydrochloride
Malachite green	o-Anisidine	Silver
Mercury	o-Anisidine hydrochloride	Silvex, propylene glycol butyl ether ester
Mestranol	o-Cresol	Sodium fluoroacetate
Methacrylonitrile	o-Phenylphenol	Sodium-o-phenylphenol
Methomyl	o-Toluidine	Sulfallate
Methyl chloroform	o-Toluidine hydrochloride	Sulfotepp
Methyl hydrazine	Octachlorostyrene	TEPP
Methylene chloride	Oydemetonmethyl	Terbufos
Methylenebis(2-chloroaniline)	p,p'-DDE	Tetrachloroethylene
Methylthiouracil	p,p'-TDE (p,p'-DDD)	Tetrachloroguaiacol
Mirex	p-Chlorophenol	Tetrachlorvinphos
Mitomycin C	p-Cresidine	Tetranitromethane
Monocrotaline	p-Cresol	Thallium
Monocrotophos	p-Nitrosodiphenylamine	Thioacetamide
Mustard gas	Paraquat	Thiourea
N,N'-diethylthiourea	Pentachloronitrobenzene	Thiram
N-(2-hydroxyethyl) ethyleneimine	Pentachlorophenol (and salts)	Toluene
N-methyl formamide	Phenazopyridine hydrochloride	Toxaphene
N-nitroso-di-N-butylamine	Phenesterin	Triaryl phosphate esters
N-nitroso-N-ethylurea	Phenobarbitol	Tributyltin (and salts and esters)
N-nitroso-N-methylurea	Phenol	Trichloroethylene
N-nitroso-N-methylurethane	Phenytol	Trifluralin
N-nitrosodi-N-propylamine	Phenytol sodium	Trimethylphosphate
N-nitrosodiethylamine	Phorate	Tris(2,3-dibromopropyl)phosphate
N-nitrosodimethylamine	Phosazetim	Uracil mustard
N-nitrosodiphenylamine	Phosmet	Urethane (monomer)
N-nitrosomethylvinylamine	Phosphamidon	Vinyl bromide
N-nitrosomorpholine	Piperonyl sulfoxide	Vinyl chloride
N-nitrososarcosine	Polybrominated biphenyls (PBB)	Zinc
Naphthalene	Polychlorinated biphenyls (PCB)	Ziram

TABLE 6 - Dioxin and Furan Congeners

<u>Dioxin congeners</u>	<u>Furan Congeners</u>
2,3,7,8-Tetrachlorodibenzo-p-dioxin	2,3,7,8-Tetrachlorodibenzofuran
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1,2,3,7,8-Pentachlorodibenzofuran
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2,3,4,7,8- Pentachlorodibenzofuran
1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin	1,2,3,4,7,8-Hexachlorodibenzofuran
1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin	1,2,3,6,7,8- Hexachlorodibenzofuran
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	2,3,4,6,7,8- Hexachlorodibenzofuran
Octachlorodibenzo-p-dioxin	1,2,3,7,8,9- Hexachlorodibenzofuran
	1,2,3,4,6,7,8-Heptachlorodibenzofuran
	1,2,3,4,7,8,9-Heptachlorodibenzofuran
	Octachlorodibenzofuran

TABLE 7 - Quantification Levels for Selected Parameters

Total Antimony	1 µg/l	Total Cyanide	5 µg/l
Total Arsenic	1 µg/l	Total Lead	1 µg/l
Total Berium	5 µg/l	Total Lithium	<96 µg/l
Total Beryllium	1 µg/l	Total Mercury	0.5 µg/l
Total Boron	20 µg/l	Total Nickel	5 µg/l
Total Cadmium	0.2 µg/l	Total Selenium	1.0 µg/l
Hexavalent Chromium	5 µg/l	Total Silver	0.5 µg/l
Total Chromium	10 µg/l	Total Strontium	< 8300 µg/l
Total Copper	1 µg/l	Total Thallium	1 µg/l
Available Cyanide	2 µg/l	Total Zinc	10 µg/l

TABLE 8 Other Common Types of Wastewater

Demineralizer regeneration water	Hydrostatic pressure test water	Raceway cleaning water
Drinking fountain overflow	Intake screen backwash	Sand filter backwash
Filter backwash	Iron filter backwash	Sanitary wastewater
Fire system test water	Landfill leachate	Secondary containment area water
Fish rearing water	Mine dewatering water	Swimming pool wastewater
Floor drainage water	Peat mine dewatering water	Tank bottom water
Foundation drainage water	Petroleum contaminated water	Vegetable wash water
Groundwater seepage	Pump screen backwash	Water softener backwash

Whole Effluent Toxicity Test Guidance and Requirements

Whole Effluent Toxicity (WET) tests shall be conducted in accordance with the following. Chronic tests shall be conducted unless the applicant has requested and received MDEQ approval for the use of Acute tests. Approval will be based on high receiving water dilution or other site-specific factors. An 40:1 or greater dilution ratio of the receiving water's 95 percent drought flow to the facility's design flow may justify reduction to acute testing. Such requests, with supporting rationale, shall be made in writing to the appropriate District Supervisor of the Water Bureau (see Page 18 of this Appendix). *If the permittee has previously received approval to conduct toxicity testing using a more sensitive species, the permittee may request approval from the District Supervisor to waive the multiple species testing requirements specified below. Such approval will be based on no significant changes to facility operations and wastewater characteristics.*

The following requirements apply to chronic tests:

- 1) Test species shall include the fathead minnow and *Ceriodaphnia dubia*.
- 2) Testing and reporting procedures for the fathead minnow and *Ceriodaphnia* are contained in the "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (Fourth Edition) (USEPA-821-R-02-013).
- 3) If the Total Ammonia Nitrogen level in the effluent is greater than 3 mg/l, then toxicity test pH shall be maintained at 8 standard units.

The following requirements apply to acute tests:

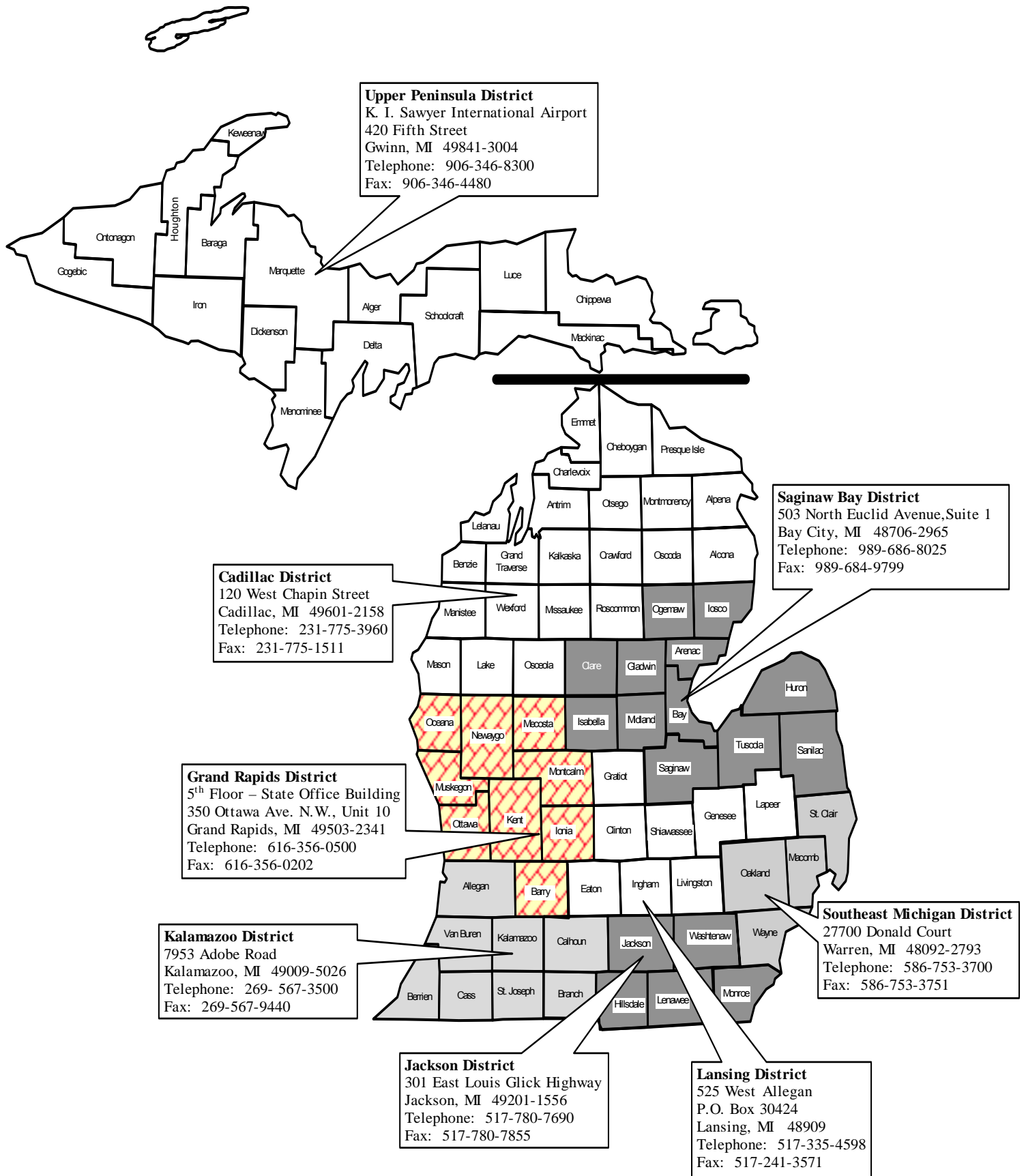
- 1) Acute test species shall include fathead minnow and either *Daphnia magna*, *Daphnia pulex*, or *Ceriodaphnia dubia*.
- 2) Testing and reporting procedures shall follow procedures contained in USEPA-821-R-02-012, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (Fifth Edition).
- 3) If the Total Ammonia Nitrogen level in the effluent is greater than 5 mg/l, acute test pH shall be maintained at the pH of the effluent at the time of sample collection.

Toxicity test data acceptability is contingent upon the validation of the test method by the testing laboratory. Such validation shall be submitted to the MDEQ upon request. Previously-submitted toxicity test results need not be resubmitted. Rather, provide a summary of the results of all previous tests indicating: (1) test date; (2) species tested; and (3) all acute and/or chronic toxic unit values (TUa, TUc) obtained.

The results of the tests shall be reported using the Acute Toxicity Test Report, *Ceriodaphnia Dubia* Chronic Toxicity Test Report, and the Fathead Minnow Chronic Toxicity Test Report available in this Appendix. Please do not submit additional forms or paperwork pertaining to WET tests with this Application.

The applicant does not need to submit eDMR results for previously-submitted WET Tests.

Water Bureau District Boundaries with County Divisions



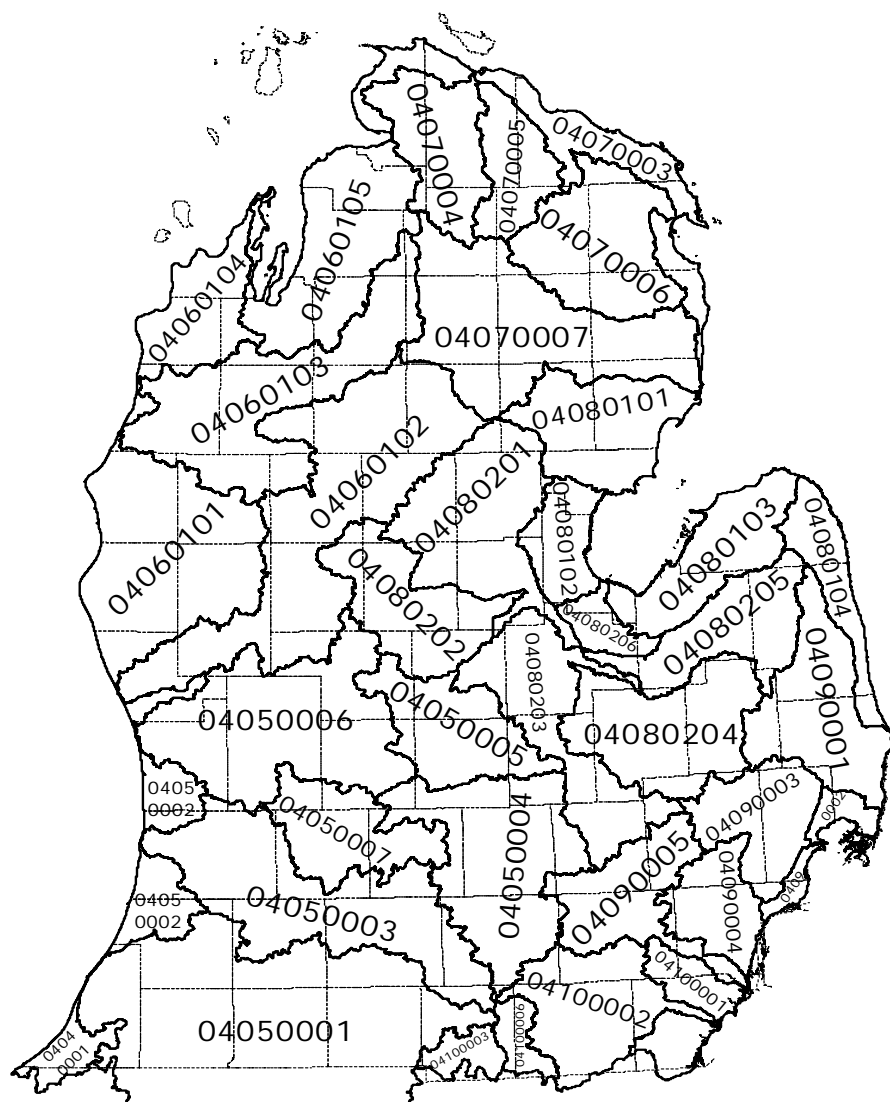
Upper Peninsula Hydrologic Map with Hydrologic Unit Codes



Upper Peninsula Watershed Names

04010302	-----	Bad-Montreal	04030110	-----	Escanaba
04020101	-----	Black-Presque Isle	04030111	-----	Tacoosh-Whitefish
04020102	-----	Ontonagon	04030112	-----	Fishdam-Sturgeon
04020103	-----	Keweenaw Peninsula	04020201	-----	Betsy-Chocolay
04020104	-----	Sturgeon	04020202	-----	Tahquamenon
04020105	-----	Dead-Kelsey	04020203	-----	Waiska
04030106	-----	Brule	04060101	-----	Pere Marquette
04030107	-----	Michigamme	04060107	-----	Brevoort-Millecoquins
04030108	-----	Menominee	04070001	-----	St. Marys
04030109	-----	Cedar-Ford	04070002	-----	Carp-Pine

Lower Peninsula Hydrologic Map with Hydrologic Unit Codes



Lower Peninsula Watershed Names

04040001 ----- Little Calumet-Galien	04070003 ----- Lone Lake-Ocqueoc	04080205 ----- Cass
04050001 ----- St. Joseph	04070004 ----- Cheboygan	04080206 ----- Saginaw
04050002 ----- Black-Macatawa	04070005 ----- Black	04090001 ----- St. Clair
04050003 ----- Kalamazoo	04070006 ----- Thunder Bay	04090002 ----- Lake St. Clair
04050004 ----- Upper Grand	04070007 ----- Au Sable	04090003 ----- Clinton
04050005 ----- Maple	04080101 ----- Au Gres-Rifle	04090004 ----- Detroit
04050006 ----- Lower Grand	04080102 ----- Kawkawlin-Pine	04090005 ----- Huron
04050007 ----- Thornapple	04080103 ----- Pigeon-Wiscoggin	04100001 ----- Ottawa-Stony
04060102 ----- Muskegon	04080104 ----- Birch-Willow	04100002 ----- Raisin
04060103 ----- Manistee	04080201 ----- Tittabawassee	04100003 ----- St. Joseph
04060104 ----- Betsie-Platte	04080202 ----- Pine	04100006 ----- Tiffin
04060105 ----- Boardman-Charlevoix	04080203 ----- Shiawassee	
04060106 ----- Manistique	04080204 ----- Flint	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
<http://michigan.gov/deq>

NO EXPOSURE CERTIFICATION
FOR EXCLUSION OF COVERAGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY
By Authority of Act 451, PA 1994, Part 31

DEQ only do not write in this space

Submission of this No Exposure Certification constitutes certification the Facility identified below does not require permit authorization for storm water discharges associated with industrial activity in Michigan based on 40CFR 122. The Michigan Department of Environmental Quality may deny an exclusion at any time it determines that conditions at the facility do not meet the exclusion requirements. If the exclusion is denied, the owner must obtain authorization to discharge prior to any point source discharge of storm water from the facility.

Be advised that facilities excluded from permit requirements due to "no exposure" are required to submit a no exposure certification form to the Michigan Department of Environmental Quality once every five years to continue to be excluded from the permitting requirements.

SECTION I

FACILITY INFORMATION (where discharge occurs)			OWNER/PERMITEE INFORMATION		
SITE/FACILITY NAME			COMPANY NAME		
ADDRESS 1			ADDRESS 1		
ADDRESS 2			ADDRESS 2		
CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
RECEIVING WATERS			CONTACT PERSON		
LATITUDE (to nearest 15 seconds)	LONGITUDE (to nearest 15 seconds)		CONTACT PERSON TELEPHONE		

____ ¼ of ____ ¼ Section: _____, Town: T_____, Range: R_____, Township: _____, County: _____.

PRIMARY STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE

TO DETERMINE THE PRIMARY INDUSTRIAL ACTIVITY, USE THE VALUE OF NET REVENUES. IF SUCH INFORMATION IS NOT AVAILABLE FOR A PARTICULAR FACILITY, THE NUMBER OF EMPLOYEES OR PRODUCTION RATE FOR EACH PROCESS MAY BE COMPARED. THE OPERATION THAT GENERATES THE MOST NET REVENUE OR EMPLOYS THE MOST PERSONNEL IS THE OPERATION IN WHICH THE FACILITY IS PRIMARILY ENGAGED.

THIS FACILITY HOLDS EXISTING NPDES PERMIT:

Please list any other NPDES number(s):

PLEASE RETURN THIS COMPLETED FORM (Page 1 & 2), AND ANY ATTACHMENTS, TO THE FOLLOWING ADDRESS:

KELLY PLOEHN
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
2nd FLOOR NORTH
525 WEST ALLEGAN STREET
P.O. BOX 30273
LANSING MI 48909

If you have any questions regarding the completion of this form, please call (517) 335-4137.

NOTE: There are TWO pages to a complete no exposure exclusion request. Please make sure that both pages have been completed prior to submitting

SECTION II

PLEASE COMPLETE ALL OF THE FOLLOWING INFORMATION

EXPOSURE CHECK LIST

Are any of the following materials or activities exposed to storm water, now or in the foreseeable future?

1.	Using, storing, or cleaning of industrial machinery or equipment, or residuals from such practices.	Yes	No
2.	Materials or residuals on the ground or in storm water inlets from spills or leaks.	Yes	No
3.	Materials or products from past industrial activities.	Yes	No
4.	Material handling equipment (except adequately maintained vehicles).	Yes	No
5.	Materials or products during loading, unloading or transporting activities.	Yes	No
6.	Materials or products stored outdoors (except final product intended to be used outside where exposure to storm water does not result in a discharge of pollutants).	Yes	No
7.	Materials contained in open, unsealed, deteriorated, leaking, or improperly managed drums, barrels, tanks, etc.	Yes	No
8.	Materials or products handled or stored on roads or railways owned or maintained by the facility.	Yes	No
9.	Waste materials (except general office trash).	Yes	No
10.	Application or disposal of process wastewater (unless otherwise permitted).	Yes	No
11.	Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e. under an air quality control permit).	Yes	No
NOTE:	If you answered yes to any of the above questions (1-11), you are not eligible for the no exposure exclusion	Yes	No
12.	Facility has conducted an investigation to locate any illicit connections to the storm sewer system.	Yes	No
13.	Based on the above investigation, the facility has concluded that there are no illicit connections to the storm water system.	Yes	No

SECTION III

CERTIFICATION

State of Michigan regulations require this form be signed as follows:

Corporation: by the principal executive officer or vice-president or higher, or his/her designated representative if the representative is responsible for the overall operation of the facility from which the discharge described originates.

Partnership: by a general partner

Sole proprietorship: by the proprietor

Municipal, state, or other public facility: by a principal executive officer, the mayor, village president, city or village manager, or other duly authorized employee.

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from storm water permitting.

I certify under penalty of law that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under 40 CFR 122.26(g)(2))

I understand that I am obligated to submit a no exposure certification form to the Michigan Department of Environmental Quality once every 5 years. I understand that I must allow the Michigan Department of Environmental Quality to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain discharge authorization under an NPDES permit prior to any point source discharge of storm water associated with industrial activity from the facility.

I certify, under penalty of law, that this document and all attachments were prepared by me, or under my direction or supervision in accordance with a system to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I certify under penalty of law that I possess full authority on behalf of the legal owner/permittee to sign and submit this No Exposure Certification.

Printed name:

Title:

Signature:

Date:



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – WATER BUREAU

ACUTE TOXICITY TEST REPORT

By authority of PA 451 of 1994, as amended.

INSTRUCTIONS: Use this form to report acute toxicity test results. Use separate forms for more than 1 test.

1. NAME OF FACILITY (on NPDES permit)				2. NPDES PERMIT #			
3. RECEIVING WATER (as designated in permit)				4. OUTFALL		5. RECEIVING WATER CONCENTRATION (if known)	
6. TEST LAB (Name and Address)						7. AGE RANGE OF ORGANISMS AT TEST START	
8. TEST START DATE		9. TEST END DATE		10. TEST SPECIES		11. REPORT DATE	
12. NAME OF PERSON CONDUCTING TEST				13. NAME/PHONE # OF PERSON WHO CAN ANSWER QUESTIONS ABOUT THIS REPORT			
14. SAMPLE COLLECTION DATES		15. DATE RECEIVED		16. ARRIVAL TEMPERATURE (°C)			
Sample 1:		Sample 1:		Sample 1:			
Sample 2 (if any):		Sample 2 (if any):		Sample 2 (if any):			
17. DATE OF FIRST USE		18. TOTAL RESIDUAL CHLORINE (mg/l)		19. AMMONIA (mg/l as N)			
Sample 1:		Sample 1:		Sample 1:			
Sample 2 (if any):		Sample 2 (if any):		Sample 2 (if any):			
20. WAS SAMPLE DECHLORINATED?				21. DESCRIBE DECHLORINATION (if any)			
Sample 1: <input type="radio"/> YES <input type="radio"/> NO							
Sample 2: <input type="radio"/> YES <input type="radio"/> NO							
22. EFFLUENT SAMPLES WERE COLLECTED (check one) <input type="radio"/> BEFORE CHLORINATION <input type="radio"/> AFTER CHLORINATION							
<input type="radio"/> AFTER CHLORINATION, BEFORE DECHLORINATION <input type="radio"/> AFTER DECHLORINATION <input type="radio"/> FACILITY DOES NOT CHLORINATE							
23. DESCRIBE ANY DEVIATIONS FROM TEST METHODS (For example, pH-controlled test, reduced DO levels in test leading to aeration, sample exceeded holding time.							
24. WAS THE EFFLUENT FILTERED?				25. STATE MESH SIZE OF FILTER (if filtered)			
<input type="radio"/> YES <input type="radio"/> NO							
26. EFFLUENT SAMPLE TYPE (check one type for each sample)							
Sample 1: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs) _____ <input type="radio"/> GRAB				27. IDENTIFY THE DILUENT (O ₁) CONTROL			
Sample 2: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs) _____ <input type="radio"/> GRAB (if any)				IDENTIFY THE SECONDARY (O ₂) CONTROL (if used)			
28. SUMMARY OF RESULTS - PERCENT MORTALITY PER CONCENTRATION							
CONTROLS		EFFLUENT CONCENTRATIONS					
DAY	O ₁	O ₂	%	%	%	%	%
29. 48-HOUR LC ₅₀ (for <i>Daphnia magna</i> or <i>Ceriodaphnia dubia</i> acute tests)			30. 96-HOUR LC ₅₀ (for fathead minnow acute tests)			31. TU _a (acute toxic units)	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – WATER BUREAU
CERIODAPHNIA DUBIA CHRONIC TOXICITY TEST REPORT

By authority of PA 451 of 1994, as amended.

INSTRUCTIONS: Use this form to report chronic toxicity test results. Use separate forms for more than 1 test.

1. NAME OF FACILITY (on NPDES permit)				2. NPDES PERMIT #			
3. RECEIVING WATER (as designated in permit)				4. OUTFALL		5. RECEIVING WATER CONCENTRATION (if known)	
6. TEST LAB (Name and Address)							
7. TEST START DATE		8. TEST END DATE		9. AGE RANGE OF ORGANISMS AT TEST START		10. REPORT DATE	
11. NAME OF PERSON CONDUCTING TEST				12. NAME/PHONE # OF PERSON WHO CAN ANSWER QUESTIONS ABOUT THIS REPORT			
13. SAMPLE COLLECTION DATES		14. DATE RECEIVED		15. ARRIVAL TEMP (°C)			
Sample 1:		Sample 1:		Sample 1:			
Sample 2:		Sample 2:		Sample 2:			
Sample 3:		Sample 3:		Sample 3:			
16. DATE OF FIRST USE		17. TOTAL RESIDUAL CHLORINE (mg/l)		18. AMMONIA (mg/l as N)			
Sample 1:		Sample 1:		Sample 1:			
Sample 2:		Sample 2:		Sample 2:			
Sample 3:		Sample 3:		Sample 3:			
19. WAS SAMPLE DECHLORINATED?		20. DESCRIBE DECHLORINATION (if any)					
Sample 1: <input type="radio"/> YES <input type="radio"/> NO							
Sample 2: <input type="radio"/> YES <input type="radio"/> NO							
Sample 3: <input type="radio"/> YES <input type="radio"/> NO							
21. EFFLUENT SAMPLES WERE COLLECTED (check one) <input type="radio"/> BEFORE CHLORINATION <input type="radio"/> AFTER CHLORINATION							
<input type="radio"/> AFTER CHLORINATION, BEFORE DECHLORINATION <input type="radio"/> AFTER DECHLORINATION <input type="radio"/> FACILITY DOES NOT CHLORINATE							
22. DESCRIBE ANY DEVIATIONS FROM TEST METHODS (For example, pH-controlled test, reduced DO levels in test leading to aeration, sample exceeded holding time.)							
23. EFFLUENT FILTERED?		24. STATE MESH SIZE OF FILTER (if filtered)					
<input type="radio"/> YES <input type="radio"/> NO							
25. EFFLUENT SAMPLE TYPE (check one type for each sample)						26. IDENTIFY THE DILUENT (O ₁) CONTROL	
Sample 1: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)_____ <input type="radio"/> GRAB SAMPLE						_____ IDENTIFY THE SECONDARY (O ₂) CONTROL (if used) _____	
Sample 2: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)_____ <input type="radio"/> GRAB SAMPLE							
Sample 3: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)_____ <input type="radio"/> GRAB SAMPLE							
27. SUMMARY OF DATA AND RESULTS - SURVIVAL AND REPRODUCTION							
CONCENTRATION OF EFFLUENT (%)	O ₁	O ₂	%	%	%	%	100%
48-HOUR SURVIVAL (%)							
7-DAY MEAN REPRODUCTION/FEMALE							
7-DAY MEAN SURVIVAL (%)							
28. 48-HOUR LC ₅₀ (%)		29. TU _a (acute toxic units)					
30. 7-DAY CHRONIC VALUE (%)		31. NOEC		32. LOEC		33. TU _c (chronic toxic units)	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER BUREAU
FATHEAD MINNOW CHRONIC TOXICITY TEST REPORT

By authority of PA 451 of 1994, as amended.

INSTRUCTIONS: Use this form to report chronic toxicity test results. Use separate forms for more than one test.

1. NAME OF FACILITY (on NPDES permit)				2. NPDES PERMIT # M I 0 0			
3. RECEIVING WATER (as designated in permit)			4. OUTFALL		5. RECEIVING WATER CONCENTRATION (if known)		
6. TEST LAB (Name and Address)							
7. TEST START DATE		8. TEST END DATE		9. AGE RANGE OF ORGANISMS AT TEST START		10. REPORT DATE	
11. NAME OF PERSON CONDUCTING TEST				12. NAME/PHONE # OF PERSON WHO CAN ANSWER QUESTIONS ABOUT THIS REPORT () -			
13. SAMPLE COLLECTION DATES Sample 1:		14. DATE RECEIVED Sample 1:			15. ARRIVAL TEMPERATURE (°C) Sample 1:		
Sample 2:		Sample 2:			Sample 2:		
Sample 3:		Sample 3:			Sample 3:		
16. DATE OF FIRST USE Sample 1:		17. TOTAL RESIDUAL CHLORINE (mg/l) Sample 1:			18. AMMONIA (mg/l as N) Sample 1:		
Sample 2:		Sample 2:			Sample 2:		
Sample 3:		Sample 3:			Sample 3:		
19. WAS SAMPLE DECHLORINATED? Sample 1: <input type="radio"/> YES <input type="radio"/> NO Sample 2: <input type="radio"/> YES <input type="radio"/> NO Sample 3: <input type="radio"/> YES <input type="radio"/> NO		20. DESCRIBE DECHLORINATION (if any)					
21. EFFLUENT SAMPLES WERE COLLECTED (check one) <input type="radio"/> BEFORE CHLORINATION <input type="radio"/> AFTER CHLORINATION <input type="radio"/> AFTER CHLORINATION, BEFORE DECHLORINATION <input type="radio"/> AFTER DECHLORINATION <input type="radio"/> FACILITY DOES NOT CHLORINATE							
22. DESCRIBE ANY DEVIATIONS FROM TEST METHODS (For example, pH-controlled test, reduced DO levels in test leading to aeration, sample exceeded holding time.)							
23. EFFLUENT FILTERED? <input type="radio"/> YES <input type="radio"/> NO		24. STATE MESH SIZE OF FILTER (if filtered)					
25. EFFLUENT SAMPLE TYPE (check one type for each sample) Sample 1: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)____ <input type="radio"/> GRAB Sample 2: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)____ <input type="radio"/> GRAB Sample 3: <input type="radio"/> 24-HR COMPOSITE <input type="radio"/> GRAB/COMPOSITE (give # of grabs)____ <input type="radio"/> GRAB					26. IDENTIFY THE DILUENT (O ₁) CONTROL _____ IDENTIFY THE SECONDARY (O ₂) CONTROL (if used) _____		
27. SUMMARY OF DATA AND RESULTS - SURVIVAL AND GROWTH							
CONCENTRATION OF EFFLUENT (%)	O ₁ (diluent)	O ₂ (if used)	%	%	%	%	100%
96-HOUR SURVIVAL (%)							
7-DAY MEAN BIOMASS (mg/initial fish)							
7-DAY MEAN SURVIVAL (%)							
28. 96-HOUR LC ₅₀ (%)		29. TU _a (acute toxic units)					
30. 7-DAY CHRONIC VALUE (%)		31. NOEC		32. LOEC		33. TU _c (chronic toxic units)	